DOCUMENT RESUME

ED 173 189 **SO 011 471**

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TITLE Understanding Urban Development In Canada. "Understanding Economics" Series No. 3.
INSTITUTION Canadian Foundation for Economic Education, Toronto.
PUB DATE 77
NOTE 30p.; For related documents, see SO 011 469-474 ; Best copy available
AVAILABLE FROM Canadian Foundation for Economic Education, 155 University Avenue, Suite 301, Toronto, Ontario, Canada M5H 3B7 ($1.00 paper copy)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Changing Attitudes; *City Government; City Improvement; *City Planning; *City Problems; Foreign Countries; Government Role; Housing; Management; Needs; Quality of Life; Relationship; Secondary Education; Social Studies; Transportation; Urban Areas; *Urbanization; Urban Population; Urban Studies; *Urban to Rural Migration
IDENTIFIERS Canada

ABSTRACT

This booklet for Canadian secondary school students examines urbanization and its relationship to other factors of the economy. Five sections analyze urbanization, the pattern of urban development, community needs, the management of urban growth, and urban governance. Part I traces the growth of the Canadian population, noting that 10% of the population lived in urban communities in 1871 while 62% lived in urban communities in 1971. Tables illustrate population by province and metropolitan areas. Part II examines housing patterns, the impact of the automobile, the population explosion, and public transportation priorities. Part III discusses urban planning and taxation, and the quality of urban life. Part IV focuses on urban management and current "growth" and "No-growth" debates. Part V explains problems concerned with the changing role of urban government. Discussions of increased expectations of citizens, the realization that many governmental decisions are subject to challenge, and controversies surrounding the need for expanded community and social services are included. (KC)

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Understanding Urban Development In Canada

T.J. Plunkett

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This booklet on Understanding Urban Development in Canada is the third of a series on Understanding Economics.

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SP-0114/71

The Canadian Foundation for
Economic Education 1977

Preface

Urban development has been an integral part of Canada's history. As indeed it has been part of the history of every country which is known to have evolved, flourished and, in many cases, disintegrated for unknown causes.

Interconnected with transportation, industrial and economic growth and cultural sophistication, urban development affects and is affected by the fundamental aspects of civilization.

Large metropolitan areas have become so complicated that many levels of government are involved, sometimes overlapping, sometimes in strong disagreement as particular interests are promoted or jeopardized. Urban experts work out master plans for the "ideal" sociological balance within an urban context, which immediately become the subject of violent controversy, so diverse are the interests at stake.

This is not new, however. Over two hundred years ago, Plato in his *Republic* painted a picture of an ideal city, and others have followed with plans for an integrated physical structure that would impose a philosophy and an order for mankind, or vice versa. Paolo Soleri is now casting into space for the master plan of the future. A few examples of his "Arcology" give us a wild look into fanciful – or perhaps not so fanciful – visions of the day after tomorrow. At the end of this booklet is his "super edifice" in the black void of space.

In today's world, understanding some of the aspects of urban development provides insight into the difficulties that decision makers in both the government and private sectors must consider. What are the trade-offs between a suburban industrial/housing complex versus leaving the land for agricultural production? Increased employment and productivity versus less employment and fields of grain?

This publication does not seek to answer these questions, but it poses some of them and explains why and how the interrelationships between urban development and other sectors of the economy become stronger and, over the years, irrevocable.

Its author, Tom Plunkett, is one of the most experienced municipal experts in Canada. For many years connected with the Canadian Federation of Mayors and Municipalities, he is now Director of the Institute of Local Government, Queen's University, Kingston. A frequent contributor to writings on municipal developments, he is editor of "Urban Focus", a magazine on Urban Government and Management in the Canadian Federal System, produced by the Institute. Few people in Canada could bring experience and perceptions to this study equal to those of Mr. Plunkett.

The statistics in this article bring us to 1971. Some of the 1976 census results are available now; the bulk will not be ready until the end of 1977 or the beginning of 1978. For consistency's sake, the editors decided against inserting those 1976 figures which are accessible. The trends are clear without them.

J.H.P.

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Photographs

The photographs in this booklet have been collected from a number of publications which are acknowledged individually on the inside back cover. With much appreciation, we thank the people who facilitated our search for entertaining and graphic representations of the story of urban development and some of its highlights.

Nearly all the pictures were photographed from the assembled publications by Robert C. Ragsdale A.R.P.S.

Urban densities

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Introduction

Canada is now classified an urban nation. This means that the majority of its citizens live in towns, cities or areas described as metropolitan. It is in or near such communities that they find their opportunities for employment, education, recreation, etc. This development of urban communities and the continuing movement of people to them are the result of important changes in the nature of the economy, the modes of transportation and communications and developments in technology. The entire process is generally known as urbanization. In historical terms the present urban condition stands in marked contrast to the situation confronting our forefathers shortly after the birth of Canada. A brief look backwards will therefore help to explain the foregoing development.

Part I Urbanization

The first Census of Canada in 1871 – just four years after Confederation – revealed that only 19 per cent of the total population of Canada could be classified as living in urban settlements. For census purposes the term "urban" is applied to any settlement with a minimum population of 1,000 persons per square mile. This means that many small towns and villages were included under this designation. However, when the term "urban" is defined as settlements with a population in excess of 10,000 persons, only nine communities could be included in this category in 1871 with a combined population representing only 10 per cent of the Canadian total. Thus, nine-tenths of the population of Canada at the time of the first Census lived on farms or in villages or towns of less than 10,000 in population. Most Canadians, therefore, carried on their lives away from the towns and cities and earned their living in farming, fishing and lumbering.

At the time of the 1871 Census, the population was concentrated largely in the central and maritime provinces. The building of the transcontinental Canadian Pacific Railway opened up the western provinces – now Manitoba, Saskatchewan, Alberta and British Columbia – and presented opportunities for more specialized economic activities.

Primarily as the result of the flow of immigration from Great Britain and Europe, the total population – and necessarily the urban population – increased, providing opportunities for expansion of such activities as selling, banking and manufacturing, thereby supplying the goods and services needed by the growing domestic market. The expanding population also enhanced primary production – agriculture, timber and mineral resources – much of which was exported to other countries. This pointed to a need for more specialized commercial, financial and service institutions.

Montreal skyline

These specialized activities can only be carried on in towns and subsequently cities, where labour, capital and eventually technology can be brought together. Thus, cities are considered "the essential focal points of economic development; an economically advanced country is invariably urbanized", and eventually "it is the city that coordinates and controls the economy."

As a consequence of these developments during the latter part of the 19th Century, and the first part of the 20th Century, Canadian towns and cities not only became larger, but their role also became more significant in the economy of the country. By the 1921 Census, the number of towns and cities exceeding 10,000 in population had increased to 63.

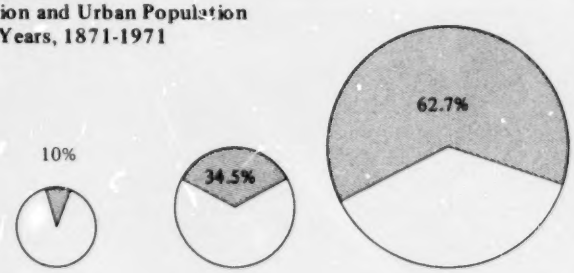
During the first four decades of the 20th Century, the total population of Canada more than doubled; the urban proportion more than quadrupled. The Census of 1941 revealed that there were some 90 communities whose population exceeded 10,000 and nearly 42 per cent of all Canadians lived within them. Even more striking was the emergence of the large city. Where in 1901 there were only two cities in Canada with a population exceeding 100,000, there were eight in this category by 1941, sheltering 23 per cent of all Canadians.

The foregoing presents a dramatic picture of the process of urbanization. The growth of cities as shown by the 1971 Census was even more startling. From the end of World War II to the beginning of the 1970s, the total population again doubled. In addition, the Census revealed that nearly two-thirds of all citizens lived in communities exceeding 10,000. There were nearly 250 such communities at that time.

And the large cities were getting bigger. In 1971, there were 25 cities with a population of at least 100,000 and of these, 14 were in excess of 200,000.

CANADA
Growth of Total Population and Urban Population
Selected Census Years, 1871-1971

The increasing size of the circles represents the increase in Canada's total population in the years shown. The darkened section shows the proportion of the total population living in urban communities. Note that in 1921, Canada's urban population was nearly as large as the 1871 total, and only about one quarter as large as the urban population in 1971.



	1871	1921	1971
Total Population (millions) (1)	3.7	8.8	21.6
Urban Population (millions) (2)	0.4	3.0	13.5
*Per Cent of Population in Urban Communities (3)	10.0	34.5	62.7
Number of Urban Communities exceeding 10,000 population (3)	9	63	246

Per Cent Urban

Source: (1) Statistics Canada, Census of Canada for the years indicated.
(2) Local Government Reference Paper No. 1. Urban Population and Municipal Organization. Institute of Local Government, Queen's University at Kingston, Ontario. February 1973
(3) Urban Communities exceeding 10,000.

* Percentages are calculated from data before they were rounded for this chart. Hence, they may not appear to be consistent with the rounded numbers.

Graphics by J.J. Siner, Consulting Economists Limited

Urban Population in Communities by Population Size Groups and Per Cent of Total Population in Each Size Group Selected Census Years, 1871 - 1971*(1)

Population Size Group	1871		1901		1921		1941		1971	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
10,000 - 25,000	3	(1.3)	11	(2.8)	44	(7.8)	51	(6.8)	134	(9.9)
25,001 - 50,000	3	(2.6)	6	(4.1)	9	(3.5)	21	(6.4)	55	(8.5)
50,001 - 100,000	2	(3.1)	3	(3.4)	5	(3.8)	10	(5.7)	32	(10.5)
100,001 - 200,000	1	(2.9)	-	-	4	(5.8)	4	(5.0)	11	(6.7)
200,001+	-	-	2	(8.9)	2	(13.0)	4	(18.0)	14	(27.0)
TOTAL	9	(10.0)	22	(19.1)	63	(34.5)	90	(41.9)	246	(62.7)

*Census data for years indicated

(1) Source: Local Government Reference Paper No. 1. Urban Population Growth and Municipal Organization. Institute of Local Government, Queen's University at Kingston, Ontario. February 1973.

Table I

The term "urban" employed in the chart on page 5 and in Table I has been applied only to those communities having a population in excess of 10,000. This emphasises the significance of the concentration of population in communities of this size; however, it does not even include all persons who can properly be described as living in urban communities.

There is a large number of settlements whose population is below 10,000 but can also be classified as urban. The Census definition of "urban" includes many such communities and when this is used to define the urban population of Canada it shows realistically the extent to which Canada has become an urban nation. Thus, the 1971 Census revealed that, by its definition, more than three-quarters of all Canadians lived in urban communities.

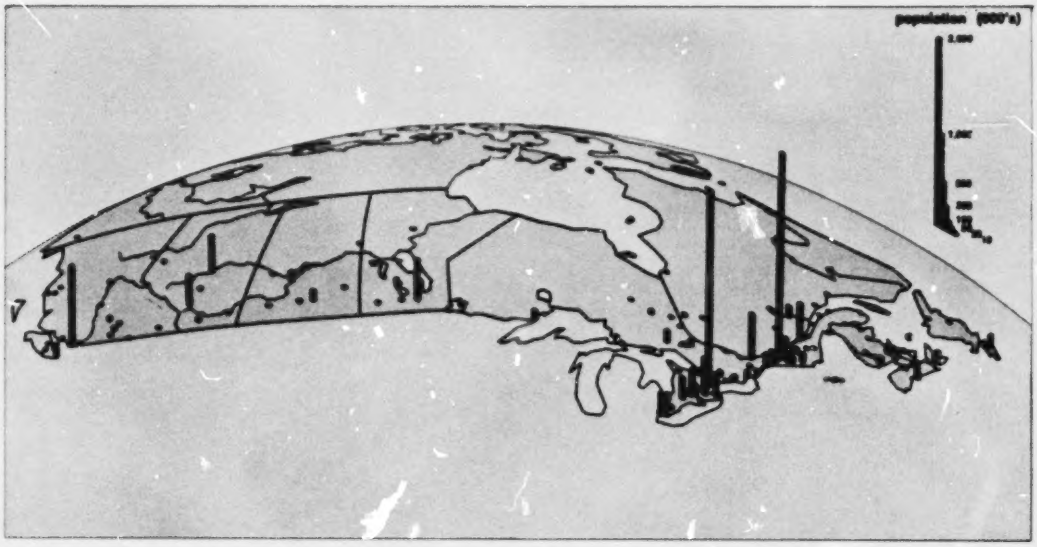
Canada has become extensively urbanized but it should not be concluded that the scale or intensity of urbanization has been the same in all regions or provinces. Industrial development sets the tone and pace for urbanization as reflected in the percentage of the urban population in the different provinces. (See Table II)

The most intensively urbanized provinces are those in central Canada – Ontario and Quebec – where the greatest proportion of economic and industrial activity is concentrated.

We have considered urban development in terms of communities – towns and cities – of a minimum population size. The picture is of a predominantly urban population distributed throughout a growing number of cities. But this picture needs further refinement in order to focus on another phenomenon of urban development – the emergence of *the metropolitan area.*

It is usual to think of the term "metropolis" as meaning the principal city of a country, a state or a region. Thus, one thinks of London as the metropolis of Great Britain or Paris as the metropolis of France. In Canada it is not unusual to think of Montreal as the metropolis in Quebec and Toronto occupying a similar position in Ontario – each being the chief city of their respective provinces.

Traced back to its Greek origin the word means "mother city". What are now referred to as metropolitan areas however, generally involve a central or "mother" city



Population, urban areas over 10,000, 1971

Table II

Urban Population as Per Cent of Total Population, by Province, 1971

Province or Territory	Total Population	Urban Population	Urban Population as (%) of Total
Ontario	7,703,105	6,343,630	82.4
Quebec	6,027,765	4,861,240	80.6
British Columbia	2,184,620	1,654,405	75.7
Alberta	1,627,875	1,196,250	73.5
Manitoba	988,245	686,445	69.5
Yukon Territory	18,390	11,215	61.0
Newfoundland	522,105	298,800	57.2
New Brunswick	634,555	361,145	56.9
Nova Scotia	788,960	447,400	56.7
Saskatchewan	926,240	490,630	53.0
Northwest Territories	34,805	16,830	48.4
Prince Edward Island	111,640	42,780	38.3
CANADA	21,568,830	16,410,785	76.1

A stage in the development of a Toronto suburb. A few years before this picture was taken, it was a rural scene. It now has high rises and industrial complexes

that has fostered the development of adjacent cities, districts and outlying satellite communities. A more formal and comprehensive definition of a metropolitan area is:

> *An area in which economic and social life is predominantly influenced by a central city, to which it is linked by common interests though not often by common policies. The metropolitan area may have one city or more as well as outlying districts or satellite communities. No physical or legal boundaries mark its borders, but roughly speaking these are the outer limits of commuting to or from the central city.*

Generally speaking a metropolitan area evolves when 1) the activities of a city come to assume a dominant position in the economy of a region through the concentration of economic activities and 2) when the city becomes a centre for major financial, commercial, industrial and governmental institutions of its region. Its influence is reinforced through the communications media which serve the region, i.e., newspapers, magazines, radio and television.

A metropolitan area cannot be defined solely in terms of size. It is not simply the largest urban area in a region to be defined as "metropolitan". A metropolitan area has no clearly defined boundaries thus it has been necessary (for statistical purposes at least) to develop a "working definition." Statistics Canada, in the development of Census data has defined a metropolitan area in the following terms:

> *. . . the main labour market area of a continuous built-up area having 100,000 or more population. It comprises a group of predominantly urban communities which are in a close economic, geographic and social relationship. The main labour market area corresponds to a commuting field or a zone where a significant number of people are able to travel on a daily basis to workplaces in the main built-up area.*

Population of Census Metropolitan Areas

1951 and 1971 (based on 1971 boundaries)

Metropolitan Area	Province	1951	1971	% Change 1951-1971
1. Calgary	Alberta	142,315	403,319	183.4
2. Edmonton	Alberta	193,622	495,702	156.0
3. Saskatoon	Saskatchewan	55,679	126,449	127.1
4. Kitchener	Ontario	107,724	226,846	110.6
5. Toronto	Ontario	1,261,861	2,628,043	108.3
6. Regina	Saskatchewan	72,731	140,734	93.5
7. Ottawa-Hull	Ontario & Quebec	311,587	602,510	93.4
8. Sudbury	Ontario	80,543	155,424	93.0
9. Vancouver	British Columbia	586,172	1,082,352	84.6
10. Montreal	Quebec	1,539,308	2,743,208	78.2
11. Hamilton	Ontario	281,901	498,523	76.8
12. London	Ontario	167,724	286,011	70.5
13. Victoria	British Columbia	114,859	195,800	70.5
14. Quebec	Quebec	289,294	480,502	66.1
15. Saint John	New Brunswick	80,689	131,814	63.4
16. Halifax	Nova Scotia	138,427	222,632	60.8
17. St. Catharines-Niagara	Ontario	189,046	303,429	60.5
18. Thunder Bay	Ontario	73,715	112,093	53.2
19. Winnipeg	Manitoba	357,229	540,262	51.2
20. Chicoutimi-Jonquière	Quebec	91,161	133,703	46.7
21. Windsor	Ontario	182,619	258,643	41.6
22. St. John's	Newfoundland	80,869	106,744	32.0
Total population of Metropolitan Areas		6,398,823	11,874,748	85.6
Total population of Canada		14,009,429	21,568,311	54.0
Total Metropolitan Area Population as % of Total Population of Canada		45.6	55.1	20.8

Source: Statistics Canada. Canada Year Book, 1974. Information Canada.

Table III

On the basis of this definition, some 22 Canadian cities have been designated as Census Metropolitan Areas each of which is generally known by the name of the central city but whose population includes that of several peripheral communities. In 1971 these twenty-two metropolitan areas contained fifty-five per cent of the total Canadian population. (See Table III). In fact, in the twenty-year period between 1951 and 1971 the population of these metropolitan areas almost doubled. Thus while more than three-quarters of the population now lives in urban centres, more than half live in a relatively small number of rapidly expanding metropolitan areas.

Part II The Pattern of Urban Development

Compared to European countries, for example, Canada has moved exceedingly rapidly into an urban state. While large European cities are the product of hundreds of years of continuous evolution, Canadian cities are, by contrast, the result of more recent development. Thus Europeans have long been used to life in cities and therefore have developed a strong urban tradition. In Canada, on the other hand, the establishment of cities, particularly large ones, has been so recent that many citizens have not yet been able to adjust their attitudes to city life.

The lifestyle of many Canadians originated in a period that was much less urbanized. In the small towns and settlements of the not too distant past there was a sense of self-sufficiency and neighbourly cooperation that often appears lacking in the modern city. There was also a sense of unlimited space available, not only for accomodation but for recreational and other needs.

Because Canada, and North America generally for that matter, started as a pioneering and largely agrarian society it is not surprising that some of the early attitudes and values fostered by that environment should be carried forward into an urban era. Take the matter of housing, for example. For many citizens the matter of the ownership of one's own house and the land surrounding it has been elevated virtually to the status of an inalienable right. No doubt this attitude grew out of our frontier tradition. In the early colonization of Canada it was necessary for an individual to build his house and acquire sufficient land not only for the house, but to sustain some of his needs for food. Thus in the development of many of our cities the "house on a fifty-foot lot" has become an almost universal standard for the provision of housing.

As a consequence, much of the residential development that took place in the cities immediately after World War II rarely contained any other kind of housing. Viewed from the air the residential areas of many of our cities resemble an endless procession of boxes all looking more or less

Suburbia: housing for thousands in a Vancouver suburb

the same. Apart from the obvious monotony of the residential landscape this development had another important consequence: relatively high costs for providing such necessary services as roads and water and sanitation systems. Furthermore, this emphasis on low-density* housing eventually forced the outward extension of residential development beyond the city boundary, as more land was sought. This process hastened the development of suburban communities, frequently caused valuable agricultural land to be taken out of production and converted to urban residential use and extended the journey from home to place of work and return. It was really only in the 1960s that costs caused some recognition of the need for alternative forms of housing which were not so wasteful of land: hence, the construction of townhouses, flats, duplexes and apartment buildings with varying densities.

The growth of activities in the central or "mother" city attracted more and more people who had to find accommodation.

Land for housing and other urban purposes was much less expensive on the periphery of the city. This encouraged the real estate industry to acquire such land and build residential communities. As this process continued it was subsequently necessary (and profitable) to establish retail stores to provide for the consumer needs of these rapidly growing communities: hence the development of shopping centres.

The Impact of the Automobile

The extent to which a city can expand is generally limited by the means of transportation available to facilitate the journey from home to place of work and return. Thus, in their early stages of development Canadian cities tended to be quite compact because most people had to walk between home and office or factory. With the advent of public transportation systems the distance could be extended. The expansion of early city transportation systems was limited by reliance on horse-drawn vehicles, and had to be confined to a relatively small and busy area in order to generate enough passengers and revenue from fares to cover the cost of operation.

With the advent of steam and electric power a greater distance could be covered without extending the time required for the journey from home to place of employment. The combination of the street car and the railroad, for example, facilitated the early metropolitan development of Montreal. In most other cities the introduction of the electrically-operated street car alone produced results that were similar if not as dramatic. However, while these forms of transportation permitted the further extension of city development they were limited by the same basic time, cost and revenue factors that had limited the operation of the early horse-power public transportation system.

Trolley at Rideau and Sussex Streets, Ottawa, circa 1900

**The term "density" refers to the average number of persons, families, or dwellings per unit of area (acre, square mile, etc.). Thus, for example, a very low density is achieved through the construction of single-family homes on lots measuring 50' x 100'. In contrast, and at the other extreme, a very high density can be achieved through the construction of multi-storied apartment buildings.*

The automobile changed all this. It removed the dependency of the individual on a public transportation system. Initially the automobile did not have much effect for it was only the few relatively wealthy individuals who could afford it. In the period between the two world wars, the automobile enabled a small but growing number of people to move further out of the city and drive from their homes to offices or factory. For the great bulk of city people however, employed in offices, factories and stores, the automobile was simply unavailable because of its price. And the economic conditions which prevailed in the 1930s did nothing to change this situation.

In the relatively prosperous years immediately following the aftermath of World War II, the price of a car came within the reach of large numbers of people of fairly modest incomes. For those who could not afford the total outlay in cash, the money could be easily borrowed through banks, finance companies and other institutions and repaid in monthly instalments. As a consequence, the formerly inaccessible land on the outward peripheries of major cities now became available for urban development. Individuals could commute longer distances in shorter periods from home to office or factory.

What came to be known as the "housing explosion" which followed World War II was the result of at least three combined conditions:

- The "population explosion" which followed the return of the troops and was further exaggerated by those who emigrated to Canada from the UK and Europe immediately after the war;
- the rapid increase in employment within the cities, such as manufacturing, commercial, financial and service activities expanded to meet growing needs;
- the widespread use of the automobile by individuals with modest incomes, which affected the type of housing demand.

In summary, the economic recovery and population explosion of the post war period and the accessibility of the automobile accelerated the development of metropolitan areas. In Toronto, for example, the city was built up to its boundaries even before World War II. Thus, there was no land available to meet the housing needs of the expanding population of the post-war years. But there was plenty of land to be found in the largely rural townships surrounding the city. As a consequence, there was extensive urban development in such places as Scarborough, Etobicoke and North York, to name but a few of the largest peripheral communities. A similar pattern of growth and development occurred in other cities such as Montreal, Winnipeg, Edmonton, Calgary and Vancouver. Much of this was made possible by the widespread use of the automobile.

Initially the development of the areas around the periphery of the larger cities, they are usually called suburbs, seemed to many people to have certain benefits. It enabled them to take advantage of the diverse employment opportunities and the varied cultural, social and educational facilities which only the city can provide. At the same time they could own a house in what was considered a quiet, country-like atmosphere: a residential community outside the city itself. Another advantage, at least at first, was the relatively low requirement in terms of services, which meant a local tax rate much lower than that required to support a house within the city.

As the population in the suburban areas increased the level of services had to be increased. More schools and libraries were built, police and fire protection forces expanded, a variety of recreational facilities provided, and new water treatment plants and sanitary sewage disposal centres constructed.

As services were developed in the suburban communities, the price of the land increased and hence the price of suburban housing. The benefits of a low tax rate were short lived. Eventually the annual taxes paid by those living in the suburbs equalled or in some cases exceeded those of the city dweller. In addition, the growing market for suburban housing attracted the attention of land speculators, whose activities helped drive up the price of land.

13

As the process continued, developers sought cheaper land further out beyond the existing suburban communities. Although initially the result was the production of less expensive housing, the story was repeated and the need for expanded local services eventually brought up the price of outlying housing to the point that there was little economic advantage in moving out again. The process of development along the lines described has often been referred to as "leapfrogging".

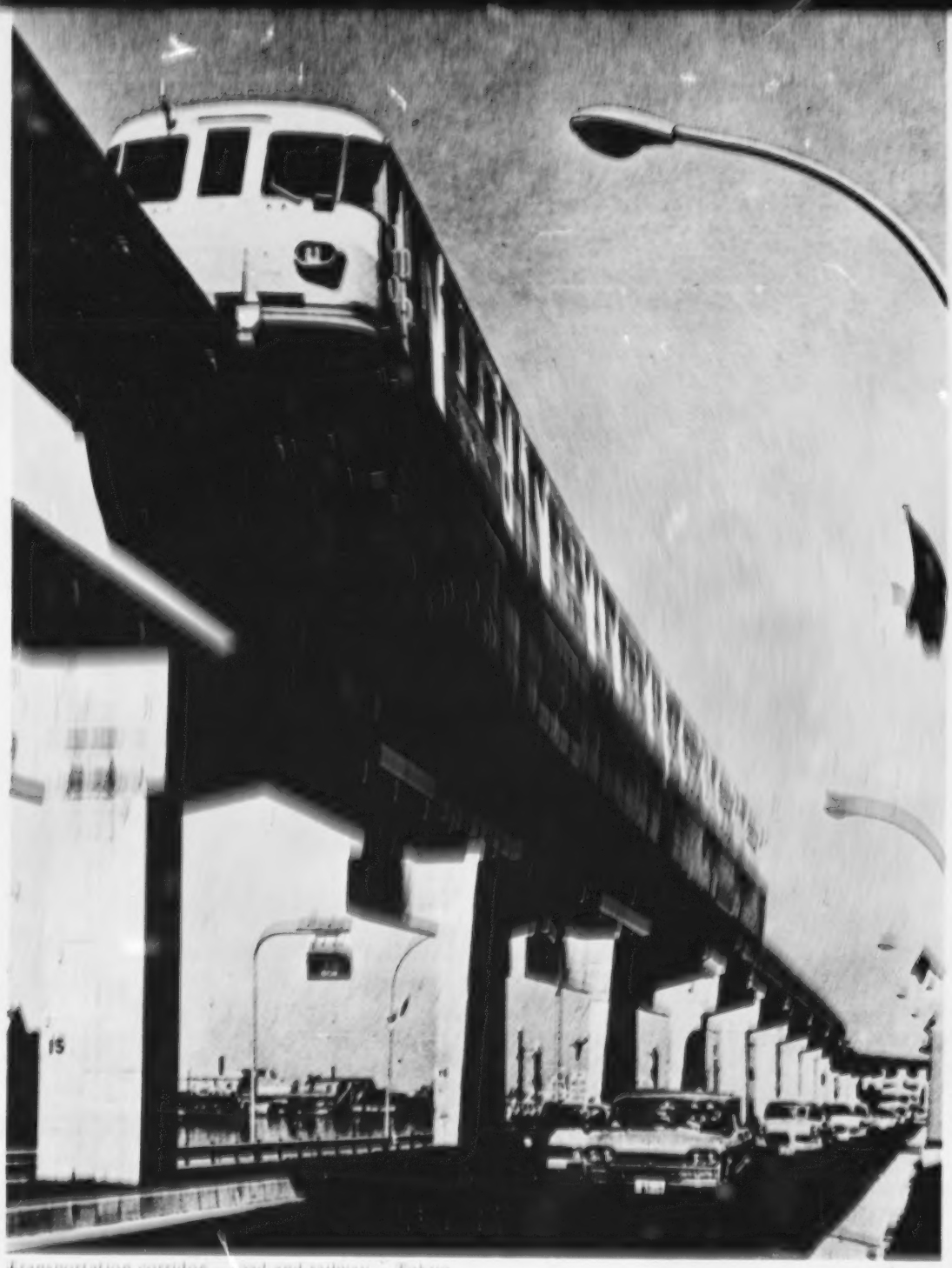
As mentioned, these events were made possible largely because of the widespread use of the automobile.

The automobile was not an unmixed blessing. For many people it did not provide the freedom of movement associated with the private vehicle. Usually the suburban home was not within walking distance of the city. With the growth of suburban development the journey for children to school was often longer than could be undertaken on foot. Even when school transportation systems were developed their facilities were not available to transport children to extra-curricular activities. Moreover, shopping facilities usually were concentrated in one area – a shopping centre. Often they could only be reached by automobile, for public transportation systems were rarely developed in suburban communities. Thus, if the non-employed members of a family were not to be completely isolated in their suburban home, a second car was virtually a necessity. As a consequence, there developed a very strong trend toward the two-car family.

The widespread and extensive use of the automobile during the past three decades gave rise to other problems. First, it produced congestion on city streets, most of which were not designed to accommodate heavy automobile traffic. As most people had to travel into the city during the same hours in the morning and return in the evening, the peak hour traffic became a serious problem. Second, it produced congestion during these peak hours.

As the traffic became heavier the journey from home to work and return took more time and there was a demand for local governments – primarily the governments of the cities – to do something about it. Reaction was to build major roadways and expressways designed to carry a much heavier volume of traffic into the city. Instead of having the traditional one lane of traffic each way, these roadways were designed to convey two, three and sometimes four lanes of autos each way. Moreover, access could be obtained at very few points on the

'So we decided to make them into a development.'



Transportation corridor – road and railway – Tokyo

throughways with the result that traffic could move somewhat faster than if every intersecting street were feeding them. While these new roads undoubtedly enabled a greater volume of traffic to move into and out of the city, other problems soon evolved. One of these was parking. Another was traffic control.

To accommodate the increased number of cars coming into the city new parking facilities had to be constructed by both public and private enterprise. But these were never constructed in sufficient volume to accommodate all the automobiles that required parking space. Thus, many city streets were used for parking. This interfered with the normal flow of traffic on city streets designed to accommodate only one lane of traffic in either direction. Hence, even during the "off-peak" hours travel by

auto within the city became difficult. Because pedestrians also use the city streets and cross them frequently, it soon became necessary, from the point of view of safety, to intensify the control of traffic by a variety of means: stop signs, traffic control lights, speed limits. All of these, of course, meant much more work for the police, who had to enforce the regulations associated with these forms of traffic control.

In addition most cities used busses or street cars and because of increased congestion their route time was extended, frustrating the users many of whom resorted to private automobiles. With the resulting decreased transport use, many transit systems began to lose money. The deficits had to be made up by subsidies from the city or the province, thus increasing the tax burden on urban and suburban taxpayers.

Transportation Priorities

Another difficulty caused by the automobile was really in the nature of the initial response to it. As indicated previously the facilities necessary to bring more and more automobiles into the city were provided. The building of bigger and better roadways and expressways ultimately raised the question, in many cities, of different types of transportation systems. If people opted for cars, more and more expressways with every-increasing inner-city congestion would be the result. But if the choice was in favour of moving people, one way or another, to and from their homes and places of employment, alternatives might be sought.

It soon became clear to many people that if a city continued to give priority to the automobile by building more and bigger roadways, there was a real danger that ultimately much of what was valuable in the city might be destroyed. The construction of bigger and wider roadways meant the destruction of many built-up residential and commercial areas which stood in the path or way of their proposed routes. Many of these areas had developed a strong sense of community. Even though they would be compensated for the cost of their homes and shops, few members of these communities would

be able to find r[illegible] price elsewhere. fact tht it was in intricate relation schools, churche associations, tha These intangible ties could not sim another site. Any could be overcome expressways would problem of what to do with the ever-increasing numbers of automobiles once they reached the city's core. Because of these realizations there arose in most major cities in Canada during the late 1960s and early 1970s, a growing protest against the construction of larger roadways and many city governments were faced with a growing parking problem and a shrinking supply of large blocks of land were available for commercial and residential use.

No clear cut solution to the transportation problem in cities and metropolitan areas is in sight. However, public policy is now more clearly focussed on the need to give priority to the movement of people rather than automobiles. This does not mean that the automobile can or will be banned from the streets of Canadian cities. What it does mean is that more money will be allocated to the development of public transit systems rather than expressways. Such systems can be extended to serve a wider area and made more efficient in terms of the time required for the home to work journey, it will considerably reduce people's dependence on the automobile.

The extension of public transportation systems may be limited to the more densely populated areas. Because of the low-density characteristic of much suburban development public transit service in many such areas may not be economically feasible. However, much may be, and has been, accomplished by extending the public transit services to feed passengers at such points the existing parking [illegible] priorities to the [illegible] high speed transit [illegible] at least has the advantage of reducing the volume of traffic into the city core area.

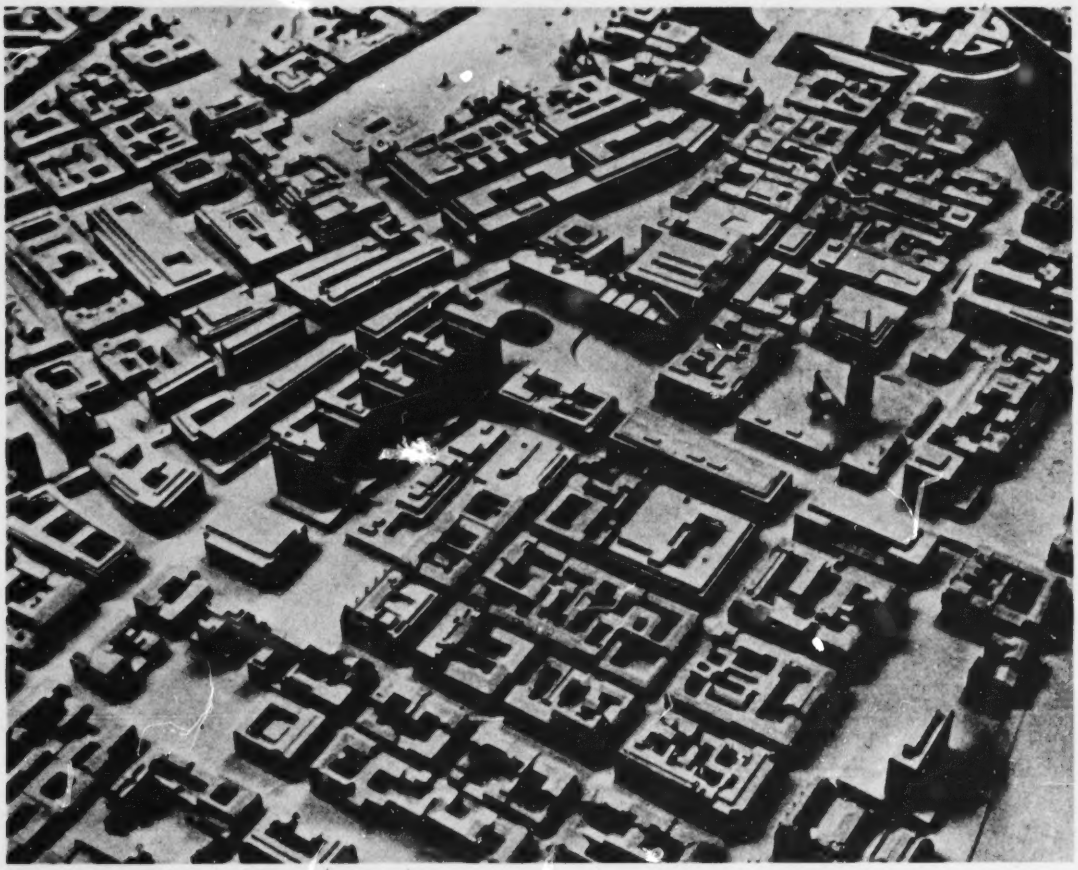
Part III Community Needs and Urban Development

It has become common to associate the term "planning" with the development of cities. In fact, there has developed a profession known as town planning. In their professional capacity planners attempt to ensure orderly development, to anticipate the needs which must be met when development occurs and generally to encourage the best use of land. The latter is influenced by the land-use regulations adopted by local governments in both the cities and suburban communities. These generally take the form of subdivision and zoning regulations. Subdivision regulations are concerned with the division of vacant land into lots and the servicing and other standards that should apply to these lots. Zoning regulations establish the uses of land that will be permitted in certain areas, e.g., residential, commercial, industrial, etc., the minimum size of lots and the location of buildings on them.

Planning and Taxation – the Suburban Dilemma

Until recently the planning of cities was confined to their physical and economic development. The former focussed on the use of land and the provision of necessary services while economic considerations were largely concerned with the implications of development for the municipal tax base.

What is generally known as the *municipal tax base* is the total of the assessed value of all real property in a community. It is on this base that a local government, whether in a city or a suburb, levies a rate to yield the tax revenue necessary to pay for many of the local services provided. Since non-residential property owners use these services much more intensely than the average home, they are taxed at a higher rate. When the tax base remains fairly stable, increases in the cost of local government operations



A planning model, Stockholm central area

must be met by increasing the tax rate. And when the rate is increased significantly, individual property owners quite naturally become upset. As a consequence, local government officials try to develop policies and procedures that will reduce the necessity for the tax rate being increased too rapidly.

This concern with the tax base and the rate levied on it often influenced the attitude of local governments toward planning and development. For a long time this was reflected in active encouragement of growth. The more development that occurred, for example, the greater would be the increase in the tax base. Thus, many communities could predict an annual increase in the tax base which, without increasing the tax rate, would produce a larger yield in tax revenue. More important, perhaps, was the recognition that certain types of development, e.g. commercial and industrial, brought higher returns than residential development alone. This led to what became known as "balanced assessment" under which it was felt that ideally the municipal tax base should be made up of sixty per cent residential and forty per cent commercial and industrial assessment. The rationale underlying this approach was based on two factors:

(a) commercial and industrial development yielded a much higher assessed value than did residential development, because it is profit-oriented and;

(b) commercial and industrial development did not require such services as schools, libraries, social services, etc.

As a consequence local government concern with property taxation decisions relative to land use control were often made with a view to enhancing the tax base rather than the most appropriate use of land. Thus local development policies were often designed to facilitate commercial and industrial development in land use. In addition, building regulations sometimes sought to secure the more expensive type of housing. While these actions could be justified on the grounds of improving the economic well-being of a community in terms of moderating the impact of property taxation, other consequences were sometimes overlooked. In suburban communities, for example, housing has tended to be expensive and out of reach of people with modest incomes. Moreover, as was noted previously, the low-density character of many such communities has created problems in extending urban transit systems to lessen dependency on the automobile.

Although land for lower priced housing is often available in the suburban areas, housing development is frequently resisted on the grounds that it will not yield a high enough tax revenue to pay for necessary services. Moreover, many such communities are made up of people of similar backgrounds in terms of income, occupation and social status. This sometimes causes resistance to newcomers who may come from lower income groups and different occupational backgrounds. It is feared that they may generate social problems requiring a greater public outlay for social services.

A "canyon" street

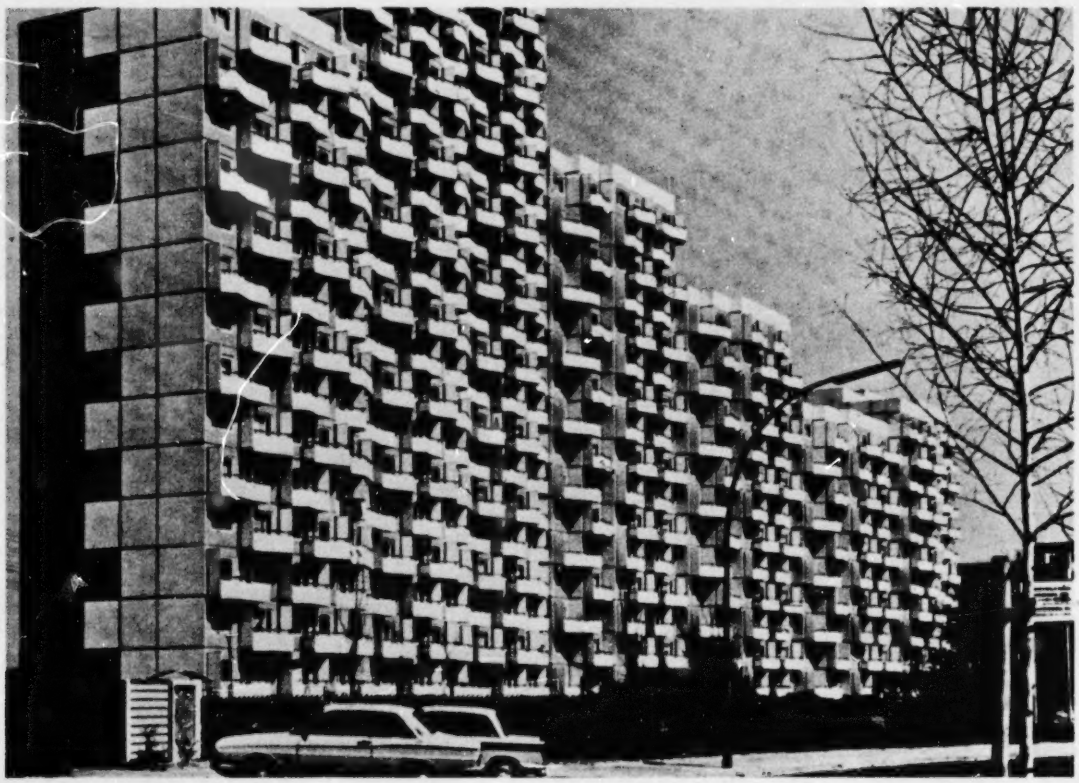
Jarvis Street, Toronto, looking north from Wilton Avenue (Dundas Street) 1903

Same view, 1972

The Quality of Urban Life

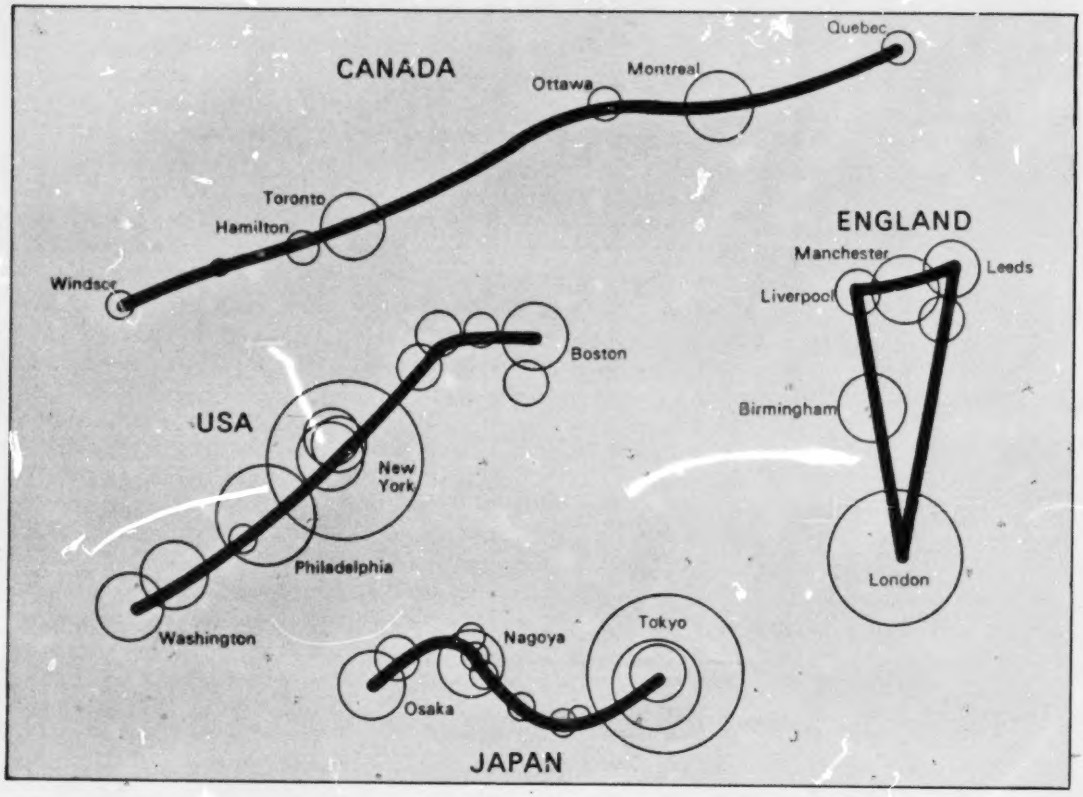
Until recently "urban problems" were defined almost exclusively in terms of development of the physical services necessary to support continued growth and development. Now that many urban communities have "matured" so to speak, the focus of their concern has begun to shift from physical to social development. What this means is that the issues of priority interest have been broadened to include some consideration of "the quality of urban life". In other words citizens are not only concerned with the bricks and mortar necessary for community development but they also recognize that development may adversely affect the kind of life that people live in an urban community.

A concern for the quality of urban life includes an awareness of changing life-styles and the necessity of responding to new and different needs in terms of community services. Thus, for example, the entry of many married women into the work force has established the need for day care centres. Advances in medical science have resulted in ever-increasing numbers of people living well beyond the period of normal retirement. Many of these people need specially designed housing, hence, housing for senior citizens has been developed, often under the auspices of local governments. In these programs, substantial financial assistance is also provided by the housing programs of the provincial and federal governments. There has also been increased emphasis in providing the facilities necessary for individuals to undertake an ever-increasing variety of recreational and cultural pursuits. These examples are illustrative of the changing dimensions of social and community services necessary to maintain a certain quality of life in an urban community.



Siedlung Osdorfer Born, Hamburg, West Germany. An adaptation of a theme which is being explored in large cities all over the world

Comparison spans between the Windsor and Quebec City axis and other urban agglomerations



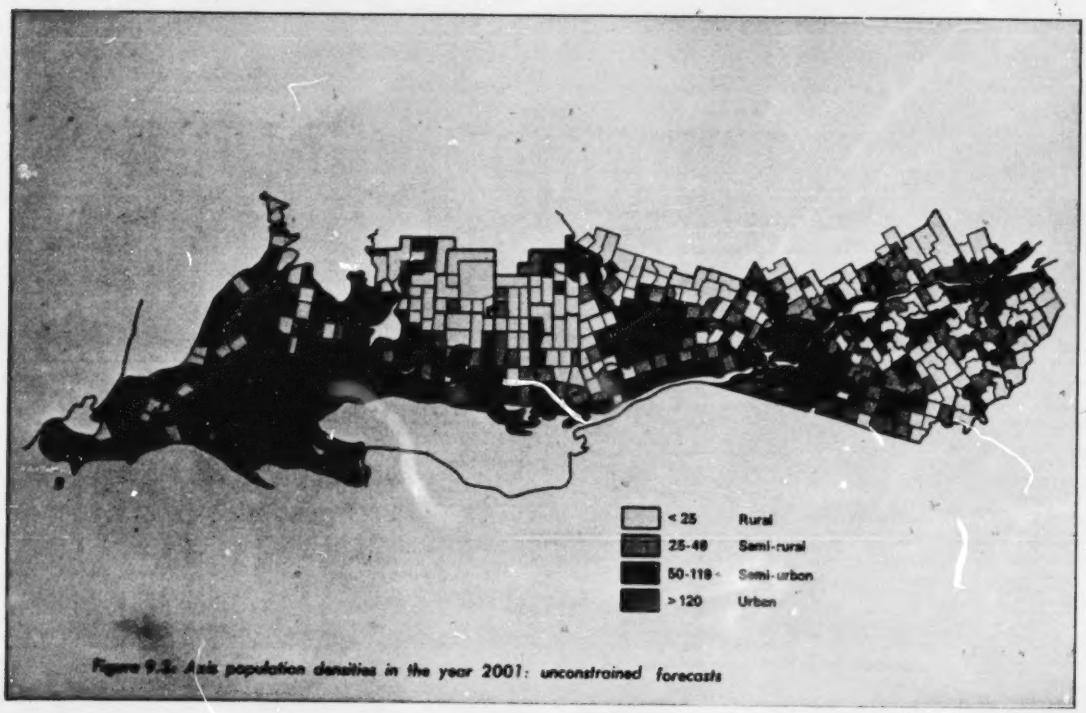


Figure 9.2: Axis population densities in the year 2001: unconstrained forecasts

Part IV The Management of Urban Growth

Despite the strong and vital role that cities play in the life of a nation, there is a persistent belief that somehow the influx to cities should be drastically curtailed. In part this stems from the concern that if our cities become much bigger they will be unmanageable. More often than not these views are espoused by people who are already comfortably established in cities. To some extent they feel overwhelmed by the current problems that must be resolved; any further increase in population will only make these problems more difficult. In their view, Canada somehow, magically, should halt the growth of cities and channel the increasing population elsewhere.

This has focussed the concern of planners and informed citizens on the issue of urban growth. The fact is that cities, and particularly the larger ones, are precisely the places where the greatest variety of opportunities exist for individual development. It is the cities which make possible the most extensive specialization of activities. For example, only cities can support such institutions as universities, research centres, art centres, symphony orchestras, recording studios, and a variety of entertainment and cultural centres. In commerce and industry, only cities can support many of the specialized skills and services associated with the development of communications and technological innovation.

A major broadcasting studio, a research centre or a major industry – all requiring a large variety of skilled employees – could not be sustained in a small town or village simply because the variety of skills and professional occupations needed for such endeavours are not available. It has happened, of course, that where these enterprises are located in a small town, the required variety of talent is imported and eventually the small town becomes a big town or city.

Sometimes communities have been built in this manner in order to develop some natural resource. Thus, there have been whole cities built in remote areas to facilitate the production of minerals or of forest products, for example. Generally such centres have been planned and built by companies to attract workers to remote locations. Because the rationale for such communities is a single industry, they have often been referred to as "company towns". Even where the communities have been well planned and appropriate facilities provided, the overwhelming presence of a single company can create an atmosphere of excessive community dependence on it. For many individuals who seek a variety of interactions with different people outside of normal working hours, the atmosphere may become oppressive because virtually everyone works for the same employer. Moreover, the economic life of the community becomes almost entirely dependent on the activities of a single employer.

At least these communities have some economic rationale. "Planned communities", independent of some resource development project, have also been suggested as one possible solution to overcrowding in existing cities. Such communities that are satellites to existing cities, such as Kanata near Ottawa, are a feasible and attractive alternative to unplanned, uncoordinated growth. But new stand-alone communities are more difficult to build. How would the inhabitants of these new cities earn their living? This fundamental issue limits the potential of this solution to the problem of urban growth.

Although many individuals in the current debate on the "growth" and "no-growth" society advocate the curtailment of development, those corporations directly involved in construction and development are understandably interested in the investment return development provides and the other economic activities that it generates. In encouraging growth they are nearly always supported by those seeking to maintain employment in construction activities, the employers who will benefit from the establishment and "growth" of a new centre, as well as the trade unions.

Conflicting views on the desirability of urban development are difficult to consider in terms of "right" and "wrong". All participants in the debate must admit that cities will continue to draw people to them. The "new town" concept is very attractive to those interested in limiting urban growth. But it would be difficult to implement, as

Urban clutter. There is much progress in getting rid of this sort of thing – or not building it in the first place. Even without looking at the cars, you know that this is a dated scene

noted above. On the other hand, the virtually unlimited growth, promoted by some construction and other industrial developers, also presents problems. It could ultimately make our cities unliveable. What is probably the crux of the issue is the kind of growth and development that should be permitted to occur. And this question is very different from whether growth should occur at all.

In other words, given the inevitability of urban development, the real question concerns its quality. The question of quality development is particularly relevant in the central areas where growth is frequently authorized on economic grounds alone. Thus, the construction of a high-rise office tower in the downtown area might require the demolition of several blocks of older housing. Often this is housing that still provides a useful role in meeting the needs of people on limited incomes and is frequently located in the heart of a viable and cohesive community. From the point of view of the local government it could be justified on the grounds that it would provide much higher assessed value than the existing property and would, therefore, yield a much greater tax return. One can note a rationale similar to that indicated earlier as employed by suburban communities.

But what are the consequences that will flow from the approval of such a development? First, those who lived or conducted small businesses in the buildings that will have to be demolished will have difficulty relocating elsewhere. Second, the completion of the new office tower will bring hundreds more workers into the downtown area many of them via automobiles, thus adding to congestion. Finally, as more and more such buildings are concentrated in the downtown core with the accompanying destruction of older homes, it becomes virtually impossible for anyone to live within the core area. As a consequence, it becomes a place that is alive by day and empty at night.

Therefore, continued development without any regard for consequences, other than narrowly defined economic ones, can have undesirable effects on the city of much the same order as has already been noted with regard to transportation. This is not to suggest that development must be prohibited, but rather that it should only take place with due regard for its impact. What this requires is the development of a planning capacity to assess and evaluate, in terms of social as well as economic criteria, the inter-relationship of numerous elements of city development, e.g., transportation, housing, community facilities, etc. This approach accepts the reality of city development but seeks to ensure that it is compatible with the total needs of the city and that its location promotes rather than inhibits a more tolerable and compassionate city environment. Although the facilities for securing such an approach are still in an embryonic state, their further refinement in a comprehensive and integrated program constitutes the real challenge of planning and managing a city's future. In part, at least, this is the task confronting the governments of urban communities.

Part V Urban Governance

In earlier sections passing reference was made to local government and the final task of this paper is to set out in general terms the role that it plays in the governance of urban areas.

The constitutional position of local or municipal government* in Canada differs substantially from that of the federal or provincial governments. The powers and responsibilities of the latter are defined in the *British North America Act*, which serves as the country's principal constitutional document. Local governments have no such established or guaranteed position. Section 92 of the BNA Act makes the establishment of municipal institutions one of the responsibilities of the provinces. Legally speaking, local governments can be described as "creatures of the province."

The range of powers, responsibilities and revenue sources assigned to such local units is set out in provincial legislation. Thus, the position of a local municipal corporation is that it may exercise only such powers and responsibilities as are delegated to it by the province. However, all provinces have seen fit to establish a comprehensive system of municipal institutions. In addition, the forces of tradition, convention and historical identity have combined to create a substantial degree of popular support for their continuance. As a consequence, no provincial government nowadays would dare, by unilateral decision, to abolish local government. Nevertheless, provincial governments have frequently enacted legislation to change municipal boundaries, bring about consolidations, and establish regional governments of one kind and another. Most such actions, though, are preceded by a period of public discussion and debate in the provincial legislature.

**The terms "local" and "municipal" are often used interchangeably.*

The Local Government System

While a number of municipal governments were established prior to Confederation in 1867, most came into being closer to the turn of the century. At first special acts of the legislature, often referred to as charters, incorporated each municipality that was established. The need for some sort of general municipal system was soon recognized and a general system established through a comprehensive "enabling act" providing for different types of local government units.

This included cities, towns, villages, townships, etc. and the powers and responsibilities that can be exercised by each – the qualifications of electors, the revenue sources assigned, etc.

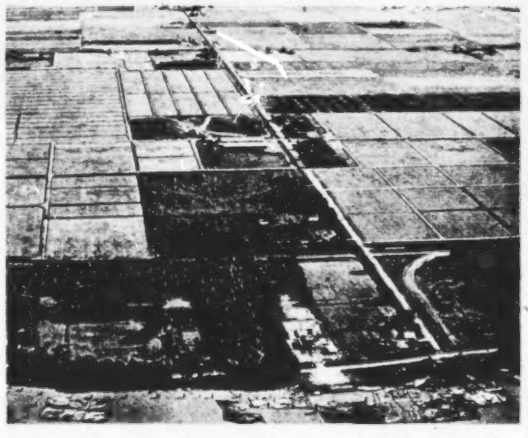
The first such general system was established in Ontario (then Upper Canada) in 1849 (prior to Confederation). Its enabling legislation was called *The Municipal Act* and is frequently referred to as the *Baldwin Act*, after its sponsor. With numerous amendments it still survives as the basic municipal legislation in that province. General municipal acts of this type were subsequently adopted in most other provinces. In some instances these involved special general acts for cities and other general acts for towns and rural municipal units. Despite the adoption of general municipal acts, some provinces excluded their largest cities from such legislation. Thus, for example, the cities of Montreal, Quebec, Winnipeg and Vancouver are governed by special legislative enactments generally referred to as the "city charter".

To this point the legislation governing the Canadian municipal system might appear to be relatively simple. However, in most provinces there is now an extensive array of statutes and regulations other than municipal acts, which also apply to local governments. Such legislation may, for example, set out the conditions under which certain forms of provincial financial assistance will be made available to municipalities, or establish the degree of regulatory control that departments and agencies of the province may exercise over particular municipal activities.

The municipal structure in most provinces cannot be understood solely in terms of the authority exercised by such municipal corporations as cities, towns, villages, municipal districts, etc. A number of services and activities within the municipality are operated at arm's length from the jurisdiction of the municipal council. For example, in most provinces public education is administered through a separately elected local educational board. Generally speaking the only educational responsibility devolving upon the municipal corporation is to raise such tax revenue as that body requests annually.

The division of responsibilities in education is relatively simple and relatively uniform across the country. This division is more complex in other fields. In Ontario, for example, public utilities such as water and electric distribution systems are operated as entities separate from the municipal corporation. Other activities that are frequently administered at arm's length are police, public libraries, parks, public health, conservation and community planning. This fragmentation of the local government structure is probably most extensive in Ontario, less so in the western and maritime provinces, and least so in Quebec. The apparent justification for many special purpose bodies, or separate administrative agencies is to emphasize the unique nature of certain functions and to remove the responsibility for their administration from the pressures of local politics.

In terms of Canada as a whole, government at the local level involves the operations of some 4,298 municipal corporations by the latest available count. This figure does not include local education boards or the variety of special-purpose bodies mentioned earlier. Such is the extent of their proliferation that it is doubtful if there exists any accurate estimate of the total.



The Fraser Valley and some industrial encroachments

There is no doubt that nearly 4,300 units of local government to serve a total population of about 23 million people does seem an alarming number. They are certainly not all of equal significance. About three-quarters of the total Canadian population live in communities governed by less than three hundred local governments.

Metropolitan or Regional Governments

One of the problems flowing from extensive urbanization has been the fragmentation of local government in metropolitan areas. Large urban areas were often served by several local government units, none of which had responsibility for the overall operation of the area. A central city or a suburban community could not undertake the development of a transit system, for example, that had to serve ten, twelve or more communities. Nor could the planning powers of any one local government be exercised beyond its own boundaries. Thus, planning could not be undertaken for an entire metropolitan area that was served by several local government jurisdictions. Therefore, a metropolitan area could be described as being economically and socially interdependent but politically fragmented.

This problem has been tackled through the establishment, over local government structures, of metropolitan or regional governments. The best known and earliest example is the Municipality of Metropolitan Toronto which came into existence in 1954. Others, similar in principle, have been established in Montreal and Quebec City where they are known as les communautés urbaines or urban committees. Still others have been established throughout Ontario as regional municipalities in such areas as Ottawa-Carleton, Hamilton-Wentworth, Peel, Waterloo and other urbanized regions.

In 1972 Manitoba went further and consolidated some eleven suburban local governments and that of the central city into one single local government for the Winnipeg area. Generally speaking, however, when regional governments are established, the existing local government carries on as usual, but certain responsibilities are transferred to the metropolitan or regional area. The councils – the decision–making bodies – of these metropolitan or regional governments consist of representatives from each of the local governments within their area. Hence, they are often described as indirectly elected bodies. This has been the basis of some criticism.

The Evolving Role of Local Government

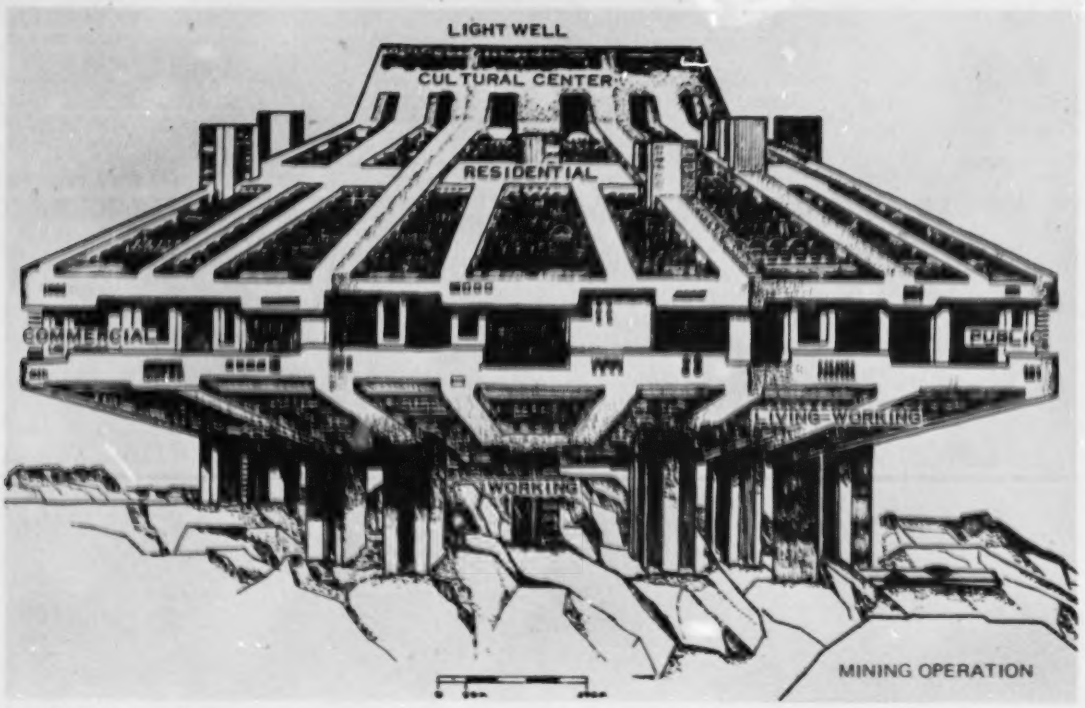
As noted previously it was during the period from the turn of the century to the outbreak of World War II that most of our urban communities took shape. During this period, the automobile had not yet become an important factor. There was a more limited view of the responsibilities that might appropriately be exercised by governments. Fundamental economic and social changes resulting from advances in transportation (e.g., air travel), comunications (e.g., television) and technology (e.g., the computer) had not yet taken place.

The demand generated by the foregoing factors resulted in "community housekeeping" governments. Thus, local governments concerned themselves mainly with development, maintenance and operation of the physical plant of a community (e.g., roads, water supply and distribution, sewage collection and disposal, etc.). Local government provided police and fire services and contributed to the support of public school systems and libraries. Modern social services had not yet been developed, parks and recreation services were very limited and an active concept of city planning was almost unknown.

This view of the role of local government led to a belief that it was essentially non-political and non-partisan* in nature. The emphasis was on administration. Members of local councils were elected in order to ensure the prudent administration of services without unduly burdening the

**This means that members of councils are not organized into political parties as are the elected representatives to the legislatures of the provincial and federal governments.*

Babel 11C



ARCOLOGY

Paolo Soleri was a student of Frank Lloyd Wright but digressed early towards the development of his own ideas. "Arcology" – the word is a mix of architecture and ecology – is "architecture in balance with nature". The three examples shown on these last pages give only a glimmer of a radiating philosophy.

Babel 11C is an example of Soleri's futuristic complex of the interactions of living, being, learning and producing. Note the scale at the bottom of the picture. We are looking at over a thousand mile diameter.

property taxpayer. Most decisions confronting a council could be made, it was believed, on the basis of technical and financial criteria. Thus, for example, the decisions to build a road depended upon engineering judgment with respect to its design and a financial review ensuring that the community could afford to pay for it. Such decisions were not expected to, and rarely did, provoke citizen reaction against them.

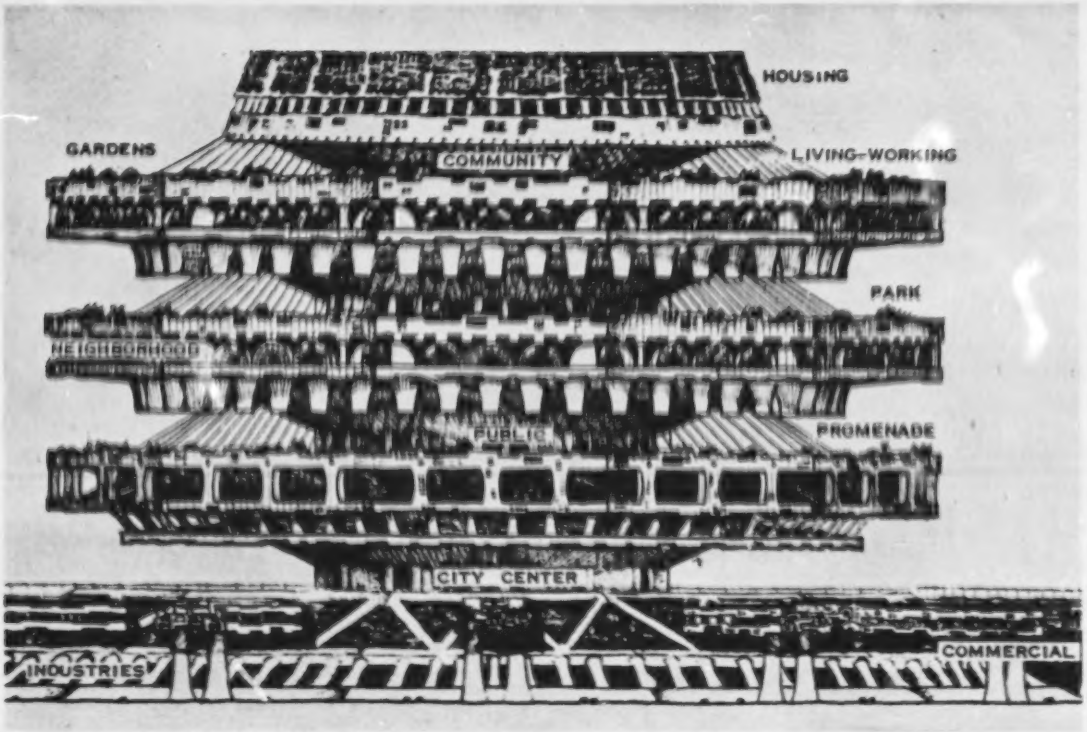
It was with this view of its role that local governments entered the post World War II period of extensive urbanization. And until the 1960s its major focus continued to be the development of the physical plant necessary to keep pace with rapid urban growth. Generally speaking this represented a continuation of the traditional role of local government albeit on a vastly expanded scale. *It was a role characterized by the relative absence of conflict and controversy, the reconciliation of which is the essence of the political process.*

To be sure, controversy did occasionally emerge. But more often than not, the citizen's involvement in local government consisted of an occasional complaint about a particular service.

This traditional role of local government is now undergoing extensive pressure for change. It is acquiring a genuinely political dimension which comes about from two influences. One of these is the effect of increasing population density in the cities on the demand for such traditional public services as police and fire protection, water supply and sanitation. The increase in demand is both quantitative and qualitative. For example, in the case of police services it is no longer possible to increase the police at a rate corresponding to the increase in population and based on a ratio of personnel per 1,000 of population that was established in the 1930s.

Expectations with respect to police services have increased substantially. Police forces must now be able to respond to a variety of demands, unknown even a few decades ago. Similarly, in the area of sanitation it is no longer possible simply to expand the sewage collection system if, at the same time, it makes the adjacent lake, river or stream unfit for human use. As a consequence, costly treatment facilities must be constructed to prevent the destruction of the physical environment.

Logology



"The main asset of **Logology** is the industry of the mind. For minds rightly turning, Logology would be the quintessence of urbanity, or worldliness, if to be of the world is to have an almost physical awareness of the universal battle put up by life to affirm its own staying power. If this industry of the mind is not also the industry of man, then Logology would be a neomonster organizing new mythological plays. In Logology the heavy industry section is absent. The industry of the mind is a light industry."

A second important influence on the role of local government is the growing realization that many decisions are now subject to challenge. Decisions based on purely technical or financial criteria alone are not sufficient. If those responsible for decisions choose to emphasize the flow of automobile traffic through the city, then expressways and freeways are the inevitable result. But there are now substantial groups in the community who wish to avoid the effects that such facilties will have on certain elements of the city's economic and social life, to say nothing of its appearance. Thus, a city council must now be prepared to face a challenge of this kind, to recognize that there are important value judgments involved in such a decision. Numerous decisions, therefore, which were made on purely technical and financial grounds, must now look at other considerations. Many individuals are now prepared to challenge decisions which used to be made on the basis of what was formerly regarded as municipal conventional wisdom. This has added a political dimension to local government decision-making.

Further illustrations of the expanding political role of local government can be found in the controversies surrounding the need for expanded social and community services. In the latter category, for example, is the matter of public or government subsidized housing. It may be argued that this is not a full-fledged local responsibility under the provisions of existing legislation. But it is a matter that concerns an increasing number of city-dwellers who cannot afford adequate housing under present market conditions. Not all urban citizens would support a strong local government in advocating this type of housing, but it is largely in the cities that the need for such housing exists and it is there, in all probability, that public housing programs can be decided and administered. Issues such as these are essentially political in nature in that they provoke the kind of controversy that can only be resolved through the political process.

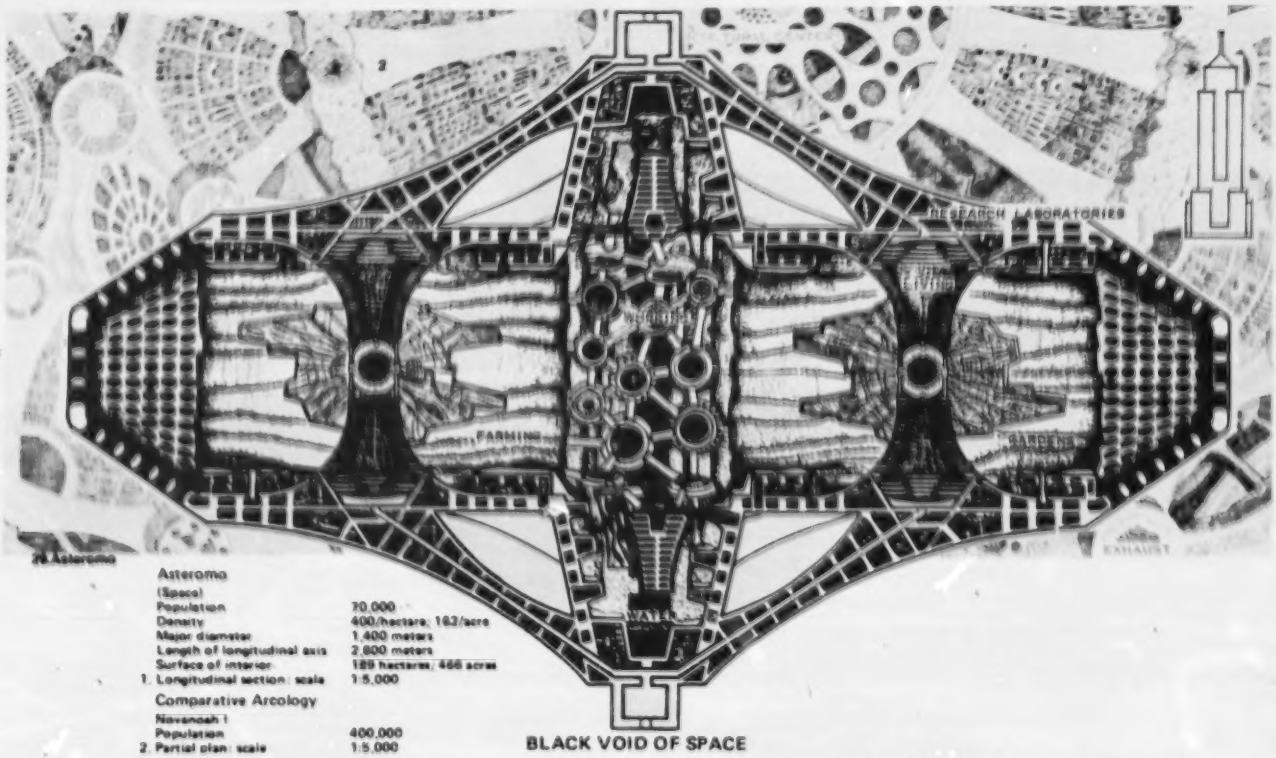
Many citizens now look to local government for leadership in developing a concensus in support of needed urban-oriented policies and programs. Moreover, there is a

growing desire on the part of urban residents to develop the means of being able to influence the quality of urban life, to preserve customary life-styles, and to give expression to emerging life-styles.

The institutional arrangements of local government, e.g., relatively small councils, limited representation, the fragmentation of local responsibilities through a variety of local boards and commissions, and excessive dependence on the property tax, are the product of an era when its traditional non-political role was established. Further complicating the role of local government is the increasing intervention of senior governments through a variety of shared-cost programs which sometimes have the effect of distorting local priorities.

The foregoing provides the basis of a real challenge. It is the need to revamp local government in order that it may play a vital and genuinely political role in the dynamic urban environment to which it now must respond. This requires that not only must local government provide a greater array of necessary services, but also give voice to and subsequently reconcile the genuine community conflict and controversy generated by important urban issues.

Asteromo



Asteromo (Space)	
Population	70,000
Density	400/hectare; 162/acre
Major diameter	1,400 meters
Length of longitudinal axis	2,800 meters
Surface of interior	189 hectares; 466 acres
1. Longitudinal section: scale	1:5,000
Comparative Arcology	
Havenoah I	
Population	400,000
2. Partial plan: scale	1:5,000

"Lunacy is part of man's burden. Thus, while man dies on earth through hunger and malice, he works feverishly at the encounter with the black naught of space. He will need out there a real machine for living. Man and his earthly morphological confinement is a dead duck in space. He will be stuffed into a superlung, wrapped by superdigestive tracts, governed by superchemical brains. He will not look into the crystal ball; he will be inside it. Life will be interiorized, not psychologically but physically: the life inside, not the life on (the earth). The center of the axis of the machine will be the center of gravity. Man's head will point at it, not his feet." Should man take with him out there, beside his biological condition, anything else that has a biological flavor? He may have to, while nurturing his expectation for a non-biological self. He may have to for his physical and mental health. Miniaturization is the password to the fantastic voyage. For a long time symbolism will be the real context of space life, the testing of events to come and not necessarily of space events but of more pressing earthly problems – the miniaturization of the performance of the human race on the space ship earth.

"**Asteromo** is an asteroid for a population of about 70,000 people. It is basically a double-skin cylinder kept inflated by pressurization and rotation on its main axis. The inner skin is the ground on which man walks. It is lined with vegetation for food and the carbon dioxide-oxygen cycle. (Unknowingly I arrived at somewhere between 10 and 20 square meters of garden per person, the same order of magnitude considered by the Russian space scientists.)"

References

1. Nader, George A. **Cities of Canada.** Vols. I and II. Toronto, Macmillan of Canada, 1975.

2. Plunkett, T. J. **The Financial Structure and the Decision-Making Process of Canadian Municipal Government.** Ottawa, Central Mortgage and Housing Corporation, 1972.

3. Abrams, Charles. **The Language of Cities.** New York; Viking Press, 1971.

4. Feldman, Lionel D. and Michael D. Goldrick. **Politics and Government of Urban Canada:** Selected Readings. Third Edition. Toronto, Methuen, 1976.

Acknowledgements

Page

3. Gunn, A. M. **Vancouver, B. C.** Vancouver UBC, 1968.
4. Photo by E. Otto, from Miller Services
7. Ray, D. Michael, et al. **Canadian Urban Trends,** Vol. 1. Toronto, Copp Clark; Ottawa, Ministry of State for Urban Affairs and Printing & Publishing, Supply and Services, 1976.
8. Kerr, Donald and Jacob Spelt. **The Changing Face of Toronto.** Ottawa, Department of Energy, Mines & Resources, 1965.
10. Gunn, op. cit.
11. Minton, Eric. **Ottawa: Reflections of the Past.** Toronto, Nelson, Foster & Scott, 1974.
13. With kind permission of the Toronto Globe & Mail.
14. Jensen, Rolf. **Cities of Vision.** Toronto, Halsted Press, 1974. (with kind permission of Applied Science Publishers Limited)
16. Ibid.
17. Ibid.
18. Filey, Mike. **Toronto: Reflections of the Past.** Toronto, Nelson, Foster & Scott, 1974.
19. Jensen, op. cit.
20. Yeates, Maurice. **Main Street: Windsor to Quebec City.** Toronto, Macmillan of Canada; Ottawa, Ministry of State for Urban Affairs and Information Canada, 1975.
22. Jensen, op. cit.
23. With kind permission of the Toronto Star.
24. Kennedy, Warnett. **Vancouver Tomorrow: A Search for Greatness.** Vancouver, Mitchell Press, 1974.
26. Soleri, Paolo. **Arcology: The City in the Image of Man.** Cambridge, MIT Press, 1969.
27. Ibid.
28. Ibid.